

Application No. 10/718,781
Amendment Dated October 28, 2010
Reply to Final Office Action of August 31, 2010

REMARKS

Applicants respectfully request further examination and reconsideration in view of the amended claims and the arguments set forth fully below. In the Final Office Action mailed August 31, 2010, claims 1-39 have been rejected. In response, the Applicants have amended claims 1 and 18, and have submitted the following remarks. Accordingly, claims 1 and 18 are still pending. Favorable reconsideration is respectfully requested in view of the amended claims and the remarks set forth fully below.

Claim Objections

Claim 1 has been objected to because it recites "the healthcare communication system...", and that term lack antecedent basis as no healthcare communication system was previously disclosed. By the above amendments, the Applicants have healthcare communication system to read healthcare information system, which does indeed have antecedent basis. Accordingly, the Applicants respectfully request the Examiner withdraw this objection.

Rejections Under 35 U.S.C. §103

Claims 1-39 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,122,664 to Boukobza et al. (hereinafter Boukobza), in view of U.S. Pre-grant Pub. No. 2003/0009244 to Engleson et al. (hereinafter Engleson). The Applicants respectfully disagree with this rejection.

In addition to the clarification amendments that will be discussed further below, the Applicants wish to direct the Examiner to the transforming, monitoring, and comparing steps of the independent claim 1, and corresponding elements in the independent claim 18, and focus on the teachings of Boukobza to illustrate how the steps of the method of the present application are not taught by Boukobza. In this portion of the claim, the element sets forth "transforming the set of data into a plurality of counters". The claim then includes monitoring and recording values of parameters by one of these transformed counters. The counters are then compared to thresholds in order to determine when a designated representative should be notified. The disclosure for the concept of these counters is included in paragraphs 20-21 of the present application.

In reviewing the Office Action, and more particularly the cited portions of the Boukobza that the Examiner utilizes to show where the set of data is transformed into counters,

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and further where the values are monitored and recorded by one of the counters, and further comparing the values of the counters to thresholds, the Applicants find no support or mention of actual counters. In fact, nowhere in the Boukobza reference is the set of data transformed into a plurality of counters. After searching the specification of the Boukobza reference online, the Applicants respectfully submit that the word "counter" does not even appear in the entire specification of Boukobza. Accordingly, the Applicants respectfully submit that Boukobza does not teach the transforming, monitoring, nor comparing steps, as described and claimed in the present application.

As stated in the Office Action, Boukobza does not recite a healthcare information system which comprises a plurality of customer information systems. Within the Office Action, it is stated that the Engleson reference does indeed include this teaching at paragraph 37. However, the Applicants respectfully disagree. Paragraph 37 teaches and discloses Figure 1, which is a hospital-wide information and care management system 30. This hospital-wide information and care management system 30 (management system 30) includes a local area network configured to be connected with and communicate with a file server 45, pharmacy computer, a nursing station 70, and bedside CPUs 80. In short, the Engleson reference includes a healthcare information system that encompasses and communicates with a plurality of **hospital information systems**. However, nowhere in Engleson is it taught that a healthcare information system comprises a plurality of **customer information systems**. It is clear from the description in the specification of the present application, and throughout this Office Action Response and previous Office Action Responses, that the system of the present application includes a plurality of customer information systems, which are very different type systems and implemented in differing environments from those described and claimed in the Engleson reference, which include various, in-house hospital information systems for keeping track of patients within the hospital environment.

Accordingly, neither Boukobza, Engleson, nor their combination teach a healthcare information system including a plurality of customer information systems, nor the transforming of data into a plurality of counters, nor any of the other elements that include the counters. The Applicants have also included select previous arguments from Office Action Responses to other Office Actions in the past.

Referring first to the independent claim 1 and the Figure 1 of the present application, the Applicants respectfully submit that each customer information system 140 of the

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present application includes a memory device 142, a processor 144 and a single proactive notification agent 148. During the monitoring of the entire proactive support system 100 (referred to as a healthcare information system in the claims), each single proactive notification in the customer information system 140 is able to communicate with any of a plurality of system module protocols. In other words, each proactive notification agent in each customer information system is diverse enough to communicate with all modules in the entire system. Accordingly, each customer information system 140 requires a single proactive notification agent 148 only. This has now been clearly set forth in the independent claims according to the above amendments.

Moving on to the Boukobza reference, it is clear from the lone figure in Boukobza and the abstract of the Boukobza reference that each management node (MN) in the information system has a corresponding autonomous agent (SAA). Therefore, instead of each customer information system only having a single proactive notification agent, the Boukobza reference utilizes a system where each management node in the customer system includes an autonomous agent. This is required in the Boukobza reference because each autonomous agent is specific to a different object type, and each specific module measuring static and dynamic parameters particular to the object type it monitors. Therefore, while the Boukobza reference includes notification agents that are able to communicate with a plurality of module protocols, the structure of the Boukobza reference requires that such autonomous agents are assigned to a particular object module.

Comparing Figure 1 to the figure of Boukobza illustrates how the structures of these two references are different. The amendments made to the independent claim 1 in the previous Office Action Response illustrate Figure 1 of the present application, and therefore the Applicants respectfully request that the structures of the Boukobza reference does not indeed teach the system and method of the present application.

The Applicants respectfully submit that the single proactive notification agent of the present application is structurally and functionally different than those agents found in the Boukobza reference. As stated in the previous Office Action response, the proactive notification agent of the present application is a single agent included in the customer healthcare information system that is capable of monitoring a plurality of object types of a plurality of nodes [Abstract]. This proactive notification agent is diverse enough to interface with a plurality of specific modules specific to the different object types or to a particular domain, each specific module

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measuring static and dynamic parameters particular to the object type monitors and collecting said measurements, testing conditions on said parameters relative to predefined thresholds and possibly triggering actions associated with said tested conditions [Abstract]. Therefore, while the Boukobza reference includes agents configured in each of the nodes for communicating with a management node specifically for that node, the system and method of the present application includes a single proactive notification agent in the healthcare information system, that is capable of communicating with all nodes, regardless of object type, and regardless of protocol, format, etc.

In Boukobza, autonomous agents (SAA) are installed in each node ($N_1, N_2 \dots N_n$), and each of these agents are configured to monitor its assigned node, to process the object types or domains in each of these nodes locally, or to feed back the information collected in each of these nodes to a graphical interface of a management node (MN) [Boukobza, Abstract]. Referring further to the Boukobza reference, the autonomous agents make "...impossible to assure...to measure specific parameters of each application, to test conditions on these parameters relative to the thresholds, and then to execute an action in order to warn of a problem, to reconfigure or to correct," [Boukobza, column 2, lines 39-65].

Furthermore, the autonomous agent SAA is "chiefly composed of a Generic Agent related to Specific Modules (SM₁, SM₂, ..., SM_n), each of which is specific to an object type of to a particular domain, and of files, one of which is intended to contain the Basic Functions used," [Boukobza, column 4, lines 36 through column 5, line 18]. It is clear from these few citations that the autonomous agents SAA are inadequate, and further unable to function as the proactive notification agent of the present application, as these autonomous agents SAA cannot communicate with all of the modules of the system, but only with its Specific Module, "...each of which is specific to an object type of to a particular domain, ...".

As follows in Boukobza, each node is specific to each object type of that particular node, and therefore requires an autonomous agent. Accordingly, Boukobza does not teach the polling step, the notifying step, nor the monitoring step of the independent claim 1, nor these corresponding elements in the independent claim 18.

Claim 1 is directed to a method for proactively monitoring a healthcare information system, the healthcare information system having a plurality of customer information systems, the method comprising: configuring a memory device in each of the customer information systems of the healthcare information system, the memory device including a set of

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executable code, and executing the set of executable code with a processor configured in each of the customer information systems, such that when the code is executed, the following steps are performed with a single proactive notification agent in any of the plurality of customer information systems in the healthcare information system, wherein the proactive notification agent communicates with any of a plurality of system module protocols: polling a set of data from the healthcare information system with the proactive notification agent, transforming the set of data into a plurality of counters, monitoring one or more performance parameters of the healthcare information system by recording the values of the parameters by one of the plurality of counters, comparing the value of the counters to thresholds, and notifying a designated representative of the value of one of the plurality of counters exceeding one of the thresholds. As discussed above, neither Boukobza, Engleson, nor their combination teach this structure or functionality. For at least these reasons, the independent claim 1 is allowable over the teachings of Boukobza, Engleson and their combination.

Claim 18 is directed to a system for proactively monitoring a healthcare information system having a plurality of customer information systems, the system comprising: a memory device configured in each of the customer information systems of the healthcare information system, the memory device including a set of executable code, a processor configured in each of the customer information systems configured to execute the code, thereby effectuating the function of the following modules: a single notification agent in each of the customer information systems, wherein the notification agent polls a set of data from the healthcare information system in any of the plurality of customer information systems, wherein the proactive notification agent communicates with any of a plurality of system module protocols, and a plurality of counters, each of which monitors one of a multiplicity of performance parameters by recording the values of the one parameter, wherein the notification agent further notifies a designated representative of the value of one of said plurality of counters exceeding a threshold. As discussed above with respect to the independent claim 1, neither Boukobza, Engleson, nor their combination teach a single notification agent configured to poll a set of data from the hospital information system nor a plurality of counters produced when the agent transforms the set of data. Accordingly, the independent claim 18 is allowable over the teachings of Boukobza, Shipon and their combination.

Claims 2-17 and 19-39 are dependent upon the independent claims 1 and 18. As discussed above, the independent claims 1 and 18 are allowable over the teachings of Boukobza,

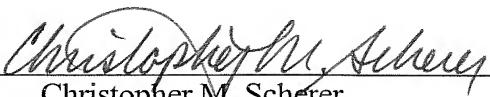
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Engleson, and their combination. Accordingly, claims 2-17 and 19-39 are also allowable as being dependent upon an allowable base claim.

For these reasons, Applicants respectfully submit that all of the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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